Docket No.: 5838-YY-1-CON

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of: **Fogal Sr., R.**

Serial No.: **09/873,872** Group Art Unit: **1772**

Filed: **June 4, 2001** Examiner: **Nguyen, T.**

For: **Method and System for Tire/Wheel Disturbance Compensation**

PETITION TO WITHDRAW HOLDING OF ABANDONMENT

Assistant Commissioner
For Patents
Washington, D.C. 20231

Sir:

1. I hereby petition to withdraw the holding of abandonment in this case, on the basis that the Applicant's Response to the Office Action was timely filed and received by the USPTO.
2. Background: The Application was mailed to the USPTO on June 4, 2001 by Express Mail.
3. An Information Disclosure Statement was timely mailed on October 24, 2001 with a certificate of mailing.
4. Due to the events of September 11, 2001, the IDS was not stamped as received until January 17, 2002.
5. Present Issue: A non-final office action was mailed from the USPTO to the Applicant on January 2, 2002.
6. A proper reply was mailed by the Applicant to the USPTO on May 2, 2002, with a petition for a one month extension of time, a check for $55 (small entity), a certificate of mailing, transmittal, and a return post card.
7. The return postcard properly identified the application number and indicated that an amendment, a one month extension, a check for $55, and a transmittal were attached to the postcard.
8. The return postcard was received by the Applicant on May 20, 2002 from the USPTO.

9. The return postcard is stamped by the USPTO and indicates that the response was received by the USPTO on May 13, 2002.
10. A Notice of Abandonment was mailed to the Applicant on August 13, 2002.
11. The Notice of Abandonment indicated that "a reply was received on 1/17/02 IDS but does not constitute a proper reply...to the non-final rejection."
12. An online search of the file contents history in PAIR for the present application does not show the Response to the Office Action as filed.
13. It is apparent that the Response to the Office Action was lost at the USPTO after it was received in the USPTO mail room.
14. A post card receipt which itemizes and properly identifies the papers which are being filed serves as *prima facie* evidence of receipt in the PTO of all items listed thereon on the date stamped thereon by the PTO (MPEP 505).
15. A copy of the post card receipt is attached herein.
16. A copy of the Response to the Office Action as filed on May 2, 2002 is attached herein.
17. A copy of the PAIR system File Contents History is attached herein.
18. Please charge Account No. 15-0450 for any fees that may be due by this paper.
19. This Petition to Withdraw Holding of Abandonment is being timely filed in that it is being filed within 1 month of Applicant learning of the August 13, 2002 mailing date of the Notice of Abandonment by the USPTO.
20. Acknowledgement of the active status of this application is respectfully requested.

I declare further that all statements made herein of my one knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001.

Date: August 19, 2002

Robert J. Clark
Reg. No. 45,835

Hahn Loeser + Parks LLP
1225 West Market Street
Akron, Ohio 44313
(330) 864-5550

Attorney Docket No. 5838-YY-1-CON Initials RJC/PAM Date 5/2/2002

Inventor/Applicant 1 ERT D. FOGAL, SR. Ser. No. 09/873,872

Title METHOD AND SYSTEM FOR TIRE/WHEEL... Filed 6/4/2001

☐ **PATENT/DESIGN APPLICATION**

_____ pgs. Specification

_____ pgs. Claims

_____ Total _____ Independent

_____ pgs. Abstract

_____ Sheet(s) of Drawings

_____ Formal _____ Informal

_____ Declaration/Power of Attorney

_____ Small Entity Status

_____ Copy of Notice to File Missing Parts

_____ PCT Request

_____ Fee Calculation Sheet

_____ Demand for Prel. Examination

_____ Base Issue Fee

_____ Supplemental Declaration

☒ **AMENDMENT** (Due 4/2/2002)

X Extension of Time For 1 Month(s)

☐ **INFORMATION DISCLOSURE STATEMENT**

_____ PTO/SB/08A _____ Refs.

☐ **ASSIGNMENT** _____ Recordation

☒ **CHECK**(s) In Amount $ 55.00

☒ **TRANSMITTAL** _____ New Application

☐ **OTHER** _____

OIPE

RECEIPT IS HEREBY ACKNOWLEDGED

MAY 13 2002

PATENT & TRADEMARK OFFICE

OLDHAM & OLDHAM CO., L.P.A.
TWIN OAKS ESTATE
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Class/Subclass GAU Information
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Search results for application number: 09/873,8			
Application Filing Date:	06-04-2001	Class / Sub-Class:	029/894.310
Issue Date of Patent:	-	Location:	FILE REPOSITOF (FRANCONIA)
Examiner Name:	NGUYEN, TRINH T	Status:	Abandoned -- Fai Respond to an O Action
Group Art Unit:	3726	Attorney Docket Number:	5838-YY-1-CON
Earliest Publication No:	US 2001-0052185 A1	Patent Number:	-
Earliest Publication Date:	12-20-2001	Customer Number:	-
Confirmation Number:	4552		

Foreign Priority | Continuity Data

File Contents History		
Number	Date	Contents Description
10	08-13-2002	Mail Abandonment for Failure to Respond tc Action
9	08-12-2002	Abandonment for Failure to Respond to Offi Action
8	01-17-2002	Information Disclosure Statement (IDS) File
7	01-02-2002	Mail Non-Final Rejection
6	12-28-2001	Non-Final Rejection
5	10-17-	Case Docketed to Examiner in GAU

	2001	
4	08-02-2001	Application Dispatched from OIPE
3	08-02-2001	Correspondence Address Change
2	06-14-2001	Application Scanned
1	06-04-2001	Initial Exam Team nn

Practitioner's Docket No. 5838-YY-1-CON *PATENT*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Robert D. Fogal, Sr.

Application No.: 09/873,872 Group No.: 3726
Filed: 06/04/2001 Examiner: Nguyen, T.
For: METHOD AND SYSTEM FOR TIRE/WHEEL DISTURBANCE COMPENSATION

Commissioner for Patents
Washington, D.C. 20231

STATEMENT ATTESTING TO MAILING OF P.T.O. CORRESPONDENCE UNDER 37 C.F.R. § 1.8(a)

I state that on May 2, 2002, I mailed the original of the attached copy of correspondence and Certificate of Mailing by first class mail, with sufficient postage, in an envelope addressed to the "Commissioner for Patents, Washington, D.C. 20231."

Also attached is a copy of the return post card with respect to the correspondence.

Robert J. Clark

Date: August 19, 2002

Robert J. Clark

Signature of person making this statement

Practitioner's Docket No. 5838-YY-1-CON

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Fogal, Sr., Robert D.

Application No.: 09/873,872
Filed: 06/04/2001
Group No.: 3726
Examiner: Nguyen, T.
For: METHOD AND SYSTEM FOR TIRE/WHEEL DISTURBANCE COMPENSATION

Assistant Commissioner for Patents
Washington, D.C. 20231

AMENDMENT TRANSMITTAL

1. Transmitted herewith is an amendment for this application.

STATUS

2. Applicant is a small entity. A statement was already filed.

EXTENSION OF TERM

3. The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136 apply. Applicant petitions for an extension of time under 37 C.F.R. 1.136 (fees: 37 C.F.R. 1.17(a)(1)-(4)) for one month:

Fee: $55.00

CERTIFICATION UNDER 37 C.F.R. 1.8(a) and 1.10*
(When using Express Mail, the Express Mail label number is *mandatory;*
Express Mail certification is optional.)

I hereby certify that, on the date shown below, this correspondence is being:

MAILING

■ deposited with the United States Postal Service in an envelope addressed to the Assistant Commissioner for Patents, Washington D.C. 20231
37 C.F.R. § 1.8(a)

■ with sufficient postage as first class mail.

37 C.F.R. § 1.10*

☐ as "Express Mail Post Office to Addressee"
Mailing Label No. _____ **(mandatory)**

TRANSMISSION

☐ facsimile transmitted to the Patent and Trademark Office, (703) _____ - _____

Date: May 2, 2002

Signature

Robert J. Clark
(type or print name of person certifying)

** Only the date of filing (1.6) will be the date used in a patent term adjustment calculation, although the date on any certificate of mailing or transmission under 1.8 continues to be taken into account in determining timeliness. See 1.703(f). Consider "Express Mail Post Office to Addressee" (1.10) or facsimile transmission (1.6(d)) for the reply to be accorded the earliest possible filing date for patent term adjustment calculations.*

FEE FOR CLAIMS

4. The fee for claims (37 C.F.R. 1.16(b)-(d)) has been calculated as shown below:

	(Col. 1) CLAIMS REMAINING AFTER AMENDMENT		(Col. 2) HIGHEST NO. PREVIOUSLY PAID FOR		(Col. 3) PRESENT EXTRA		SMALL ENTITY RATE		ADDIT. FEE
TOTAL	17	–	23	=	0	x	$ 9.00	=	$ 0.00
INDEP.	3	–	3	=	0	x	$ 42.00	=	$ 0.00
FIRST PRESENTATION OF MULTIPLE DEP. CLAIM						+	$ 0.00	=	$ 0.00
							TOTAL ADDIT. FEE		$ 0.00

No additional fee for claims is required.

FEE PAYMENT

5. Attached is a check in the sum of $55.00.

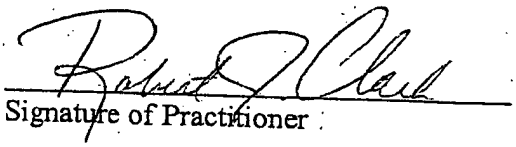
A duplicate of this paper is attached.

FEE DEFICIENCY

6. An additional extension and/or fee is required, charge Account No. 15-0450.

An additional fee for claims is required, charge Account No. 15-0450.

Date: May 2, 2002



Signature of Practitioner

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HAHN LOESER & PARKS LLP No. 002266

DATE	INVOICE NO.	REFERENCE	AMOUNT
05/02/02	710	ONE-MONTH EXTENSION OF TIME	55.00

Commissioner of Patents & Trademark

TOTAL 55.00

HAHN LOESER & PARKS LLP
TWIN OAKS ESTATE
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AKRON, OHIO 44313

FIRSTAR BANK N.A.
CLEVELAND,OHIO

56-258/412

No. 002266

05/02/02

$ 55.00

PAY

EXACTLY******55* DOLLARS AND *00*CENTS

TO THE ORDER OF Commissioner of Patents & Trademark

HAHN LOESER & PARKS LLP

NOT VALID AFTER 120 DAYS

MEMO 5838-44-1-CON

Maureen

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Fogal, Sr., R.	Examiner:	Nguyen, T.
Serial No:	09/873,872	Art Unit:	3726
Filed:	June 4, 2001	Date:	May 2, 2002
For:	METHOD AND SYSTEM FOR TIRE/WHEEL DISTURBANCE COMPENSATION		

Commissioner of Patents and Trademarks
Washington, D.C. 20231

RESPONSE TO OFFICE ACTION

This paper is filed responsive to the Office Action mailed January 2, 2002. As this response is filed within four months of the mailing date, a one month extension fee is believed to be due at this time and is enclosed herein. No fees are believed to be due for claims in excess of the three independent claims and the twenty-three total claims already paid for. If any fees are required, please consider this a petition for payment of them and charge them to Deposit Account 15-0450. As this response is believed to fully comply with the Examiner's requirement, prompt action on the merits of the case is earnestly requested.

AMENDMENTS

In the Specification:

Please make the following amendments to the specification:

Please amend paragraph [0001] as shown:

[0001] This invention relates to a method and system for introducing a predetermined amount of a force compensating material into a wheel/tire assembly for [counteracting] equalizing radial and lateral force variations at the tire/road footprint of a pneumatic tire.

Please insert the following new paragraphs after paragraph [0005].

[0005.1] The applicant's U.S. Patent 6,249,971, entitled Method and System for Tire/Wheel Disturbance Compensation, which is hereby incorporated by reference describes such an approach to disturbance compensation. This approach is briefly described with reference to prior art FIG. 4 which illustrates the innumerable radial impact forces (Fn) which continuously react between the road R and the tread T at the lower portion or footprint B during tire/wheel assembly rotation. There are an infinite number of such forces Fn at virtually an infinite number of locations (Pn) across the lateral width W and the length L of the footprint B, and FIG. 4 diagrammatically illustrate five such impact forces F1-F5 at respective locations P1-P5. It is assumed that the forces F1-F5 are different from each other because of such factors as tire wear at the specific impact force location, the road condition at each impact force location, the load upon each tire/wheel assembly, etc. Thus, the least impact force is the force F1 at location P1 whereas the greatest impact force is the force F2 at location P2. Once again, these forces F1-F5 are merely exemplary of innumerable/infinite forces laterally across the tire 11 between the sidewalls SW1 and SW2 and circumferentially along the tire interior I which are created continuously and which vary as the tire/wheel assembly 10 rotates.

[0005.2] As these impact forces are generated during tire/wheel assembly rotation, the material 20 is adapted to relocate in dependency upon the location and the severity of the impact forces Fn. In the preferred embodiment, material 20 is a composition of dry, solid particles, wherein relocation of the particle mixture 20 through movement of the individual granules, powder and dust is also inversely related to the magnitude of the impact forces. For example, the greatest force F1 is at position P1, and due to these greater forces F1, the particle mixture 20 is forced away from the point P1 with the least amount of the particle mixture remaining at the point P1 because the load force there is the highest. Contrarily, the impact force F is the lowest at the impact force location point P2 and therefor more of the particle mixture 20 will remain there. In other words, at points of maximum or greatest impact forces (F1 in the example), the quantity of the particle mixture 20 is the least, whereas at points of minimum force impact (point P2 in the example), the quantity of particle mixture 20 is proportionately increased. This movement of material creates lift, thereby substantially equalizing the radial and lateral force variations. Accordingly, the vibrations or impact forces Fn force the particle mixture 20 to continuously move away from the higher or excessive impact areas F1 or areas of maximum imbalance F1 and toward the areas of minimum impact forces or imbalance F2. The particle mixture 20 is moved by these impact forces Fn both laterally and circumferentially, but if a single force and a single granule of the particle mixture 20 could be isolated, so to speak, from the standpoint of cause and effect, a single granule located at a point of maximum impact force Fn would be theoretically moved 180 degrees therefrom. Essentially, with an adequate quantity of particle mixture 20, the variable forces Fn create through the impact thereof a lifting effect within the tire interior I which equalizes the radial force variation applied against the footprint until there is a total force equalization circumferentially and laterally of the complete tire/wheel

assembly 10. Thus the rolling forces created by the rotation of the tire/wheel assembly 10 in effect create the energy or force Fn which is utilized to locate the particle mixture 20 to achieve lift and force equalization and assure a smooth ride. Furthermore, due to the characteristics of the particle mixture 20, road resonance is absorbed as the tire/wheel assemblies 10 rotate.

Please amend paragraph [0006] as shown:

[0006] While the use of a compensating material introduced into the interior of the tire has been found to work effectively, either alone or in combination with other balancing techniques, a limitation has been found in how to introduce this material into the tire. In the prior approaches, [the] as depicted in FIG. 3, pulverulent material 20 deposited in mound M is suspended in an air stream and introduced into a tire through a hose line (not shown) and valve stem 14 of tire valve 13 used for inflation of a tire 11. Although such an approach works sufficiently, this method of delivery of a compensating material is in some instances an inconvenient delivery method, and may result in contamination of a work place where a wheel assembly is being balanced. This delivery system has further been utilized in the aftermarket environment to facilitate balancing of replacement tires, and no effective approach to introducing such material into a tire/wheel assembly at original manufacture has been provided.

Please amend paragraph [0033] as shown.

[0033] The particles must have a specific gravity greater than 1 so that they will move positively and as quickly as possible from one place to another in response to external force. It

has also been found that the addition of dry powder lubricant or anti-agglomerating agents can significantly increase the effectiveness of the principal particulate material. The dry lubricant acts to coat the interior surface of the tire as well as the primary particulate material particles. In this way particle-particle friction of the particulate material is reduced as is friction at the particulate particle-tire surface interface. The reduced friction allows the particulate material to respond more quickly in [counteracting] equalizing radial and lateral forces acting on the vehicle wheel assembly.

Please amend paragraph [0034] as shown.

[0034] When present in a sufficient amount the dry lubricant serves as a vehicle within which the pulverulent material may freely flow or move laterally and circumferentially within the tire. Further due to the extremely fine particle size of the lubricant, quantities of the lubricant itself may quickly move to positions within the tire in order to [counteract] equalize radial and lateral forces acting on the vehicle wheel assembly. Other anti-agglomerating agents to function in this manner are also contemplated.

Please amend paragraph [0038] as shown.

[0038] In order to introduce wheel [balancing] compensating material in the form of agglomerates into a tire in an amount sufficient to [balance] equalize radial and lateral forces of a wheel assembly, it is necessary to introduce at least one self-contained batch, and it may be necessary to introduce more than one self-contained batch, as in the form of pellets, or a single

self-contained batch, as in the form of a briquette 30. A self-contained batch is preferably sized such that it may be introduced into a tire as one batch (such as a briquette) or in a plurality of batches (such as pellets). The number of self-contained batches required to provide the desired compensation of radial and lateral force variations at the tire/road footprint will in turn be dependent on the characteristics of the tire/wheel assembly 10 as well as the characteristics of the vehicle on which the assembly is to be used. For example, the amount of compensating material required to provide the desired compensation function will increase as the size of the tire increases and as the gross vehicle weight increases. Further, it may be determined that a tire is imbalanced to a certain extent which would require a greater amount of compensating material. Other characteristics of a tire/wheel assembly, such as non-uniformity may also vary the amount of compensating material required. Thus, according to the invention, the self-contained batches of material may be formed in a variety of predetermined sizes to allow the desired amount of material to be easily chosen and introduced into the tire of a particular tire/wheel/vehicle combination simply and effectively. In general, the preferred amount of the preferred compensating material for passenger and light truck vehicles is in a range of 0.20-2.0 ounces while larger vehicles may use a larger amount, such as between 1.5-24 ounces. These amounts may vary depending on particular characteristics of the tire/wheel/vehicle. More particularly, the following ranges of the preferred compensating material are generally found to be effective for the following tire sizes. For a 13" tire/wheel, an amount of compensating material for incorporation therein may range from about 0.2-0.6 ounces. A 14" tire/wheel may require an amount of compensating material in the range from about 0.4-0.9 ounces, while a 15" tire/wheel may require between 0.8-1.4 ounces. For a 16" tire/wheel, the amount of compensating material that may be required may range from about 1.0-1.7 ounces, while a 17" tire/wheel may require

an amount in the range from about 1.2-2.0 ounces. For truck tires, the amount of compensating material that would be desired for compensating radial and lateral force variations may lie in the range between 2.0-6.0 ounces. Again, depending on the material itself as well as the characteristics of the tire/wheel/vehicle, the amount of material desired may vary. In general, the amount of material is sufficient to balance a wheel assembly and compensate for radial and lateral force variations at the footprint. Thus, as tires of any size, ranging from passenger car tires to truck tires, can be treated with a composition according to this invention for the purpose of balancing a wheel assembly and/or equalizing load forces. The amount (or weight) of powdered material per tire to be used will vary over a wide range, depending on the size of the tire and the amount that the tire is out of balance, whether this amount be expressed as a suitable range or as an optimum amount. A suitable amount of material to be used can be determined empirically, and indeed may require determination empirically, since the amount that a tire is out of balance is determined empirically.

Please amend paragraph [0045] as shown.

[0045] The compositions above described may be formed by known procedures. Pellets, briquettes and other agglomerates or extrudates according to this invention may be made of any convenient size and shape. Pellets are typically either spherical or ellipsoidal. Briquettes are typically pillow shaped as shown in Fig. 5. Extrudates are typically cylindrical. None of these shapes is critical. Size also is not critical, except that an agglomerate should be no larger than is necessary to contain wheel [balancing] <u>compensating</u> material sufficient to charge a given tire

size using one self-contained batch. An agglomerate can be small enough to permit charging of a plurality of self-contained batches.

Please amend paragraph [0046] as shown.

[0046] In another embodiment as shown in Fig. 6, a self-contained batch of particulate wheel [balancing] compensating material is made in the form of a bag 40 containing free flowing compensating material. A bag is also suitable as a self-containment form for liquid and liquid/solid materials. A bag is preferably made of a material that will abrade, tear or shred upon rotation of an assembled wheel. Suitable materials include generally paper and plastic. In Fig. 6, the bag 40 is designed to contain a predetermined amount of compensating material to allow shipping, handling and charging of a tire/wheel assembly without substantial loss of material, and then to break down to release the free-flowing particles or other material. In an embodiment of bag 40, a paper material may be used to form bag 40 in a conventional manner using form, fill and seal equipment. In such equipment, bag 40 is produced with an initially open top, the compensating material is placed therein, and the top is then sealed. In a particular example, a 20 lb. paper was used to form bag 40, with the edges thereof hot sealed using a 5 lb. low density polyethylene glue. Other paper weights or glues may also be suitable for a given tire/wheel assembly. Thus a bag of compensating material is self-contained in that it will retain substantially all of the material batch in the bag until the bag is transferred into a tire.

Please amend paragraph [0048] as shown.

[0048] In a further embodiment of a self-contained batch using a container such as a bag 40 for the free-flowing material, may also use perforations 48 in the bag material (whether paper or polymeric) if desired, to facilitate shredding of the bag 40 and release of the compensating material. Such perforations can be formed using conventional perforating equipment. It should be understood that any such perforations would have to be of a character to not allow the escape of material from within the bag 40 until bag 40 has been charged into a tire. The perforations, or microperforations, if any, are sufficiently small to prevent loss of wheel [balancing] compensating material through the perforation holes, but also facilitate shredding of the bag 40 upon rotation of the tire.

In the Claims:

Please delete claims 9, 16-20 without bias or prejudice to the subject matter contained therein.

Please amend the claims as follows:

1. (Amended) A method for introducing a compensating material into a tire/wheel assembly comprising the steps of:

providing a tire;

providing at least one [self-contained batch] bag of compensating material;

transferring said at least one [self-contained batch] bag of compensating material into an interior of said tire; and

mounting said tire on a wheel to form a tire/wheel assembly;

wherein compensating material is released from said at least one bag [self-contained batch such that said compensating material is able to freely flow within said tire/wheel assembly].

8. (Amended) The method of claim 1, wherein said bag [self-contained batch is provided in at least one device to contain said material, wherein said device] is ruptured [destroyed] to release said material.

10. (Amended) The method of claim [9] 1, wherein said at least one bag is a paper or plastic bag.

11. (Amended) The method of claim [8] 1, wherein said at least one bag [device] is adapted to release said compensating material after positioning thereof inside said tire and upon rotation of said tire/wheel assembly.

12. (Amended) The method of claim [8] 1, wherein said at least one bag [device] is made of a material which will break down upon being rotated within said tire/wheel assembly to release said compensating material.

13. (Amended) The method of claim [9] 1, wherein said at least one bag has a plurality of perforations therein.

14. (Amended) The method of claim [9] 1, wherein said bag has a primary seal and a secondary seal, wherein said primary seal is a relatively stronger seal than said secondary seal.

22. (Amended) A method of compensating for radial and lateral force variations at the tire/road footprint of a tire/wheel assembly comprising the steps of:

providing a predetermined amount of compensating material formed in at least one briquette [self-contained batch in a form preventing said compensating material from freely flowing apart from self-contained batch],

putting said at least one briquette [self-contained batch] into an interior of said tire,

mounting said tire on a wheel to form a tire/wheel assembly,

[mounting said tire/wheel assembly on a vehicle,]

rotating said tire/wheel assembly thereby breaking up said at least one briquette wherein said compensating material [is released from said self-contained batch and] disperses within said tire/wheel assembly [to provide compensation of said force variations].

23. (Amended) A method for introducing a compensating material into a tire/wheel assembly comprising the steps of:

providing a tire;

providing at least one bag [self-contained batch] of compensating material[, said at least one self-contained batch comprising at least one bag containing a predetermined amount of said compensating material],

placing said at least one bag into an interior of said tire;

mounting said tire on a wheel forming a tire/wheel assembly; and

[mounting said tire/wheel onto a vehicle;]

inflating said tire/wheel assembly whereby said at least one bag becomes ruptured to release said compensating material within said tire/wheel assembly[;

wherein said predetermined amount of said compensating material is directly related the size of said tire].

REMARKS

Claims 1-23 were pending in this matter at the time of the Office Action. As a result of this response, claims 9, and 16-20 have been cancelled, claims 1, 8, 10-14, and 22-23 have been amended. The response below in made in view of the claims as they stand after these changes.

Specification

The specification has been amended to add material from the parent application and as such, no new matter has been added to the specification.

Double Patenting

The Examiner has rejected claims 1-23 based on nonstatutory double patenting. However, all remaining claims have now been amended and the double patenting rejection should be reconsidered.

Claim Rejections -- 35 USC §102

The Examiner has rejected claim 1 under 35 USC §102(b) as being anticipated by Fogal (U.S. Patent Number 5,073,217) who is also the Applicant in the present application. The Examiner states that Fig. 3 of Fogal '217 shows a self-contained batch M.

The Applicant traverses the Examiner's argument for at least the following reasons. Element M does not represent a self-contained batch, but rather a pile of free-flowing pulverulent particles. Fig. 3 of Fogal '217 shows pulverulent material 20 flowing through valve stem 14 and deposited in a mound M, or pile, onto the interior I of a tire T. In the present application at page 3, lines 6-14, as originally filed and as amended, the Applicant discusses this prior art method

and the limitations of this prior approach which are overcome by the present invention. Mound M is a pile of particles of a pulverulent material. The particles are not in a bag as required by claim 1, as amended. Accordingly, withdrawal of the rejection of claim 1 is respectfully requested.

The Examiner has rejected claim 1 under 35 USC §102(b) as being anticipated by Narang (U.S. Patent Number 4,269,451). The Examiner states that Narang '451 teaches a method comprising the steps of compensating material in the form of liquid 37 and balls 40 disposed within a self-contained batch 35.

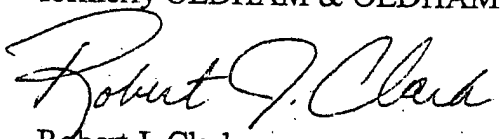
The Applicant traverses the Examiner's rejection for at least the following reasons. Claim 1, as amended, requires that the compensating material is released from the bag. This clearly distinguishes over the device 35 of Narang '451 which does not allow the balls and liquid to be released from device 35. The balls and liquid are retained within device 35. It is therefore believed that claim 1, as amended, clearly distinguishes over Narang, and withdrawal of the rejection is respectfully requested.

Information Disclosure Statement

It is noted that a timely filed information disclosure statement was filed in the present case on October 24, 2001. It is unknown if the Examiner did not receive the IDS due to problems with the mail. If the IDS has still not been received, a call to the Attorney at (330) 864-5550 would be appreciated so that the issue may be resolved.

In view of the claim amendments and of the arguments set forth above, prompt reconsideration and allowance of the claims is earnestly requested.

Respectfully submitted,
Hahn Loeser & Parks LLP
formerly OLDHAM & OLDHAM CO., L.P.A.



Robert J. Clark
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Attorney Docket No. 5838-YY-1-CON

UNMARKED VERSION OF AMENDMENTS MADE

Please replace paragraph [0001] with the following paragraph.

[0001] This invention relates to a method and system for introducing a predetermined amount of a force compensating material into a wheel/tire assembly for equalizing radial and lateral force variations at the tire/road footprint of a pneumatic tire.

Please replace paragraph [0006] with the paragraph shown below.

[0006] While the use of a compensating material introduced into the interior of the tire has been found to work effectively, either alone or in combination with other balancing techniques, a limitation has been found in how to introduce this material into the tire. In the prior approaches, as depicted in FIG. 3, pulverulent material 20 deposited in mound M is suspended in an air stream and introduced into a tire through a hose line (not shown) and valve stem 14 of tire valve 13 used for inflation of a tire 11. Although such an approach works sufficiently, this method of delivery of a compensating material is in some instances an inconvenient delivery method, and may result in contamination of a work place where a wheel assembly is being balanced. This delivery system has further been utilized in the aftermarket environment to facilitate balancing of replacement tires, and no effective approach to introducing such material into a tire/wheel assembly at original manufacture has been provided.

Please replace paragraph [0033] with the paragraph shown below.

[0033] The particles must have a specific gravity greater than 1 so that they will move positively and as quickly as possible from one place to another in response to external force. It has also been found that the addition of dry powder lubricant or anti-agglomerating agents can significantly increase the effectiveness of the principal particulate material. The dry lubricant acts to coat the interior surface of the tire as well as the primary particulate material particles. In this way particle-particle friction of the particulate material is reduced as is friction at the particulate particle-tire surface interface. The reduced friction allows the particulate material to respond more quickly in equalizing radial and lateral forces acting on the vehicle wheel assembly.

Please replace paragraph [0034] with the paragraph shown below.

[0034] When present in a sufficient amount the dry lubricant serves as a vehicle within which the pulverulent material may freely flow or move laterally and circumferentially within the tire. Further due to the extremely fine particle size of the lubricant, quantities of the lubricant itself may quickly move to positions within the tire in order to equalize radial and lateral forces acting on the vehicle wheel assembly. Other anti-agglomerating agents to function in this manner are also contemplated.

Please replace paragraph [0038] with the paragraph shown below.

[0038] In order to introduce wheel compensating material in the form of agglomerates into a tire in an amount sufficient to equalize radial and lateral forces of a wheel assembly, it is necessary to introduce at least one self-contained batch, and it may be necessary to introduce more than one self-contained batch, as in the form of pellets, or a single self-contained batch, as in the form of a briquette 30. A self-contained batch is preferably sized such that it may be introduced into a tire as one batch (such as a briquette) or in a plurality of batches (such as pellets). The number of self-contained batches required to provide the desired compensation of radial and lateral force variations at the tire/road footprint will in turn be dependent on the characteristics of the tire/wheel assembly 10 as well as the characteristics of the vehicle on which the assembly is to be used. For example, the amount of compensating material required to provide the desired compensation function will increase as the size of the tire increases and as the gross vehicle weight increases. Further, it may be determined that a tire is imbalanced to a certain extent which would require a greater amount of compensating material. Other characteristics of a tire/wheel assembly, such as non-uniformity may also vary the amount of compensating material required. Thus, according to the invention, the self-contained batches of material may be formed in a variety of predetermined sizes to allow the desired amount of material to be easily chosen and introduced into the tire of a particular tire/wheel/vehicle combination simply and effectively. In general, the preferred amount of the preferred compensating material for passenger and light truck vehicles is in a range of 0.20-2.0 ounces while larger vehicles may use a larger amount, such as between 1.5-24 ounces. These amounts may vary depending on particular characteristics of the tire/wheel/vehicle. More particularly, the following ranges of the preferred compensating material are generally found to be effective for the following tire sizes. For a 13" tire/wheel, an amount of compensating material for

incorporation therein may range from about 0.2-0.6 ounces. A 14" tire/wheel may require an amount of compensating material in the range from about 0.4-0.9 ounces, while a 15" tire/wheel may require between 0.8-1.4 ounces. For a 16" tire/wheel, the amount of compensating material that may be required may range from about 1.0-1.7 ounces, while a 17" tire/wheel may require an amount in the range from about 1.2-2.0 ounces. For truck tires, the amount of compensating material that would be desired for compensating radial and lateral force variations may lie in the range between 2.0-6.0 ounces. Again, depending on the material itself as well as the characteristics of the tire/wheel/vehicle, the amount of material desired may vary. In general, the amount of material is sufficient to balance a wheel assembly and compensate for radial and lateral force variations at the footprint. Thus, as tires of any size, ranging from passenger car tires to truck tires, can be treated with a composition according to this invention for the purpose of balancing a wheel assembly and/or equalizing load forces. The amount (or weight) of powdered material per tire to be used will vary over a wide range, depending on the size of the tire and the amount that the tire is out of balance, whether this amount be expressed as a suitable range or as an optimum amount. A suitable amount of material to be used can be determined empirically, and indeed may require determination empirically, since the amount that a tire is out of balance is determined empirically.

Please replace paragraph [0045] with the paragraph shown below.

[0045] The compositions above described may be formed by known procedures. Pellets, briquettes and other agglomerates or extrudates according to this invention may be made of any convenient size and shape. Pellets are typically either spherical or ellipsoidal. Briquettes are

typically pillow shaped as shown in Fig. 5. Extrudates are typically cylindrical. None of these shapes is critical. Size also is not critical, except that an agglomerate should be no larger than is necessary to contain wheel compensating material sufficient to charge a given tire size using one self-contained batch. An agglomerate can be small enough to permit charging of a plurality of self-contained batches.

Please replace paragraph [0046] with the paragraph shown below.

[0046] In another embodiment as shown in Fig. 6, a self-contained batch of particulate wheel compensating material is made in the form of a bag 40 containing free flowing compensating material. A bag is also suitable as a self-containment form for liquid and liquid/solid materials. A bag is preferably made of a material that will abrade, tear or shred upon rotation of an assembled wheel. Suitable materials include generally paper and plastic. In Fig. 6, the bag 40 is designed to contain a predetermined amount of compensating material to allow shipping, handling and charging of a tire/wheel assembly without substantial loss of material, and then to break down to release the free-flowing particles or other material. In an embodiment of bag 40, a paper material may be used to form bag 40 in a conventional manner using form, fill and seal equipment. In such equipment, bag 40 is produced with an initially open top, the compensating material is placed therein, and the top is then sealed. In a particular example, a 20 lb. paper was used to form bag 40, with the edges thereof hot sealed using a 5 lb. low density polyethylene glue. Other paper weights or glues may also be suitable for a given tire/wheel assembly. Thus a bag of compensating material is self-contained in that it will retain substantially all of the material batch in the bag until the bag is transferred into a tire.

Please replace paragraph [0048] with the paragraph shown below.

[0048] In a further embodiment of a self-contained batch using a container such as a bag 40 for the free-flowing material, may also use perforations 48 in the bag material (whether paper or polymeric) if desired, to facilitate shredding of the bag 40 and release of the compensating material. Such perforations can be formed using conventional perforating equipment. It should be understood that any such perforations would have to be of a character to not allow the escape of material from within the bag 40 until bag 40 has been charged into a tire. The perforations, or microperforations, if any, are sufficiently small to prevent loss of wheel compensating material through the perforation holes, but also facilitate shredding of the bag 40 upon rotation of the tire.

In the Claims:

Replace the following claims with the claims shown:

1. (Amended) A method for introducing a compensating material into a tire/wheel assembly comprising the steps of:

providing a tire;

providing at least one bag of compensating material;

transferring said at least one bag of compensating material into an interior of said tire; and

mounting said tire on a wheel to form a tire/wheel assembly;

wherein compensating material is released from said at least one bag.

8. (Amended) The method of claim 1, wherein said bag is ruptured to release said material.

10. (Amended) The method of claim 1, wherein said at least one bag is a paper or plastic bag.

11. (Amended) The method of claim 1, wherein said at least one bag is adapted to release said compensating material after positioning thereof inside said tire and upon rotation of said tire/wheel assembly.

12. (Amended) The method of claim 1, wherein said at least one bag is made of a material which will break down upon being rotated within said tire/wheel assembly to release said compensating material.

13. (Amended) The method of claim 1, wherein said at least one bag has a plurality of perforations therein.

14. (Amended) The method of claim 1, wherein said bag has a primary seal and a secondary seal, wherein said primary seal is a relatively stronger seal than said secondary seal.

22. (Amended) A method of compensating for radial and lateral force variations at the tire/road footprint of a tire/wheel assembly comprising the steps of:

providing a predetermined amount of compensating material formed in at least one briquette,

putting said at least one briquette into an interior of said tire,

mounting said tire on a wheel to form a tire/wheel assembly,

rotating said tire/wheel assembly thereby breaking up said at least one briquette wherein said compensating material disperses within said tire/wheel assembly.

23. (Amended) A method for introducing a compensating material into a tire/wheel assembly comprising the steps of:

providing a tire;

providing at least one bag of compensating material,

placing said at least one bag into an interior of said tire;

mounting said tire on a wheel forming a tire/wheel assembly; and

inflating said tire/wheel assembly whereby said at least one bag becomes ruptured to release said compensating material within said tire/wheel assembly.